Claims

1. Method for automatically packaging empty collapsible tubes (1), that are supplied by a conveyor belt, into a plurality of packaging containers that take up collapsible tubes (1)

characterized in that
the supplied collapsible tubes (1) are collected in a row without gaps, supplied in this row to an intermediate storage (13) and then jointly transferred into a packaging container; thereafter the packaging container is conveyed further on.

2. Method according to claim 1, characterized in that several rows of empty collapsible tubes (1) that have been supplied one after the other are collected in the intermediate storage (13) until a sufficient number of empty collapsible tubes (1) is achieved for filling or partially filling a packaging container.

3. Method according to claim 1 or 2, characterized in that the empty collapsible tubes (1) are arranged in conveyor trays (3) of a feeder belt (2) and are collected continuously in a row or partial row by means of separately driven and adjustable suction vees (5).

4. Method according to one of claims 1 to 3, characterized in that each row containing the desired number of collapsible tubes (1) is compacted so that said tubes come into contact with each other and is transferred into the intermediate storage (13) only after completed compaction.

5. Method according to one of claims 1 to 4, characterized in that each collapsible tube (1) in the intermediate storage (13) is in touching contact with a neighboring collapsible tube (1) on top of it at one point only.

6. Method according to one of claims 1 to 5, characterized in that each collapsible tube (1) in the intermediate storage (13) is in touching contact with two collapsible tubes (1) on top of it.

7. Method according to one of claims 1 to 6, characterized in that a packaging container can be arranged behind each intermediate storage (13) in a swivelling and vertically adjustable manner.

8. Method according to claim 7, characterized in that each packaging container can be arranged on a holding fork (17).

9. Method according to one of claims 1 to 8, characterized in that conveyor belts (20, 20', 21, 21') for the supply of empty and removal of full packaging containers are arranged at two different levels.

10. Method according to one of claims 1 to 9, characterized in that a moving slide transfers all of the collapsible tubes (1) stored in the intermediate storage (13) into a packaging container.

11. Method according to one of claims 1 to 10, characterized in that the intermediate storage (13) is provided with a fixed base plate (15) with adjustable lateral guides (24), adjustable limiting plates (25, 25') as well as at least two sets of movable bottom strips (12a, 12b, 12c and 12a', 12b', 12c').

12. Method according to claim 11, characterized in that the movable bottom strips (12a, 12b, 12c and 12a', 12b', 12c') are arranged in the intermediate storage (13) such that they can be passed through the base plate (15) and are movable synchronously with each other.